CLAIMS:

1. A joist comprising lower and upper vertically spaced-apart chords rigidly interconnected by a succession of tension and compression webs extending between the chords, each said compression web having lower and upper angularly extending flat end portions which are respectively independently bolted to a top surface of said lower chord and an angularly extending lower flat end portion of an adjacent one of said tension webs, and to an undersurface of said upper chord and an angularly extending upper flat end portion of another adjacent one of said tension webs, wherein said lower and upper flat end portions of each said tension web are respectively pressed against said lower chord and said upper chord by a corresponding lower flat end portion of an adjacent compression web and a corresponding upper flat end portion of another adjacent compression web, respectively.

2. A joist as defined in claim 1, wherein each of said compression webs has a first hole defined in said lower flat end portion thereof, said first hole being in registry with a first pair of corresponding holes respectively defined through said top surface of said lower chord and said lower flat end portion of said adjacent one of said tension webs, said first hole being placed in registry with said first pair of corresponding holes for receiving a bolt therein, and wherein each of said compression webs has a second hole defined in said upper flat end portion thereof, said second hole being in registry with a second pair of corresponding holes respectively defined through said undersurface of said upper chord and said upper flat end portion of said other adjacent one of said tension webs, said second hole being placed in registry with said second pair of corresponding holes for receiving a bolt therein.

3. A joist as defined in claim 1, wherein said tension and compression webs are connected to each other and to said upper and lower chords at nodal points by way of a single bolt at each said nodal point.

4. A joist as defined in claim 2, wherein each of said compression and tension webs includes an intermediate section extending between said lower and upper angularly extending flat end portions thereof, said lower and upper flat end portions extending in opposed parallel directions relative to said intermediate section.

5. A joist as defined in claim 4, wherein said lower and upper flat end portions of each said compression web respectively extend inwardly of a corresponding lower flat end portion of said adjacent one of said tension webs and a corresponding upper flat end portion of said another adjacent one of said tension webs, and wherein said intermediate section of each said compression web extends from said lower flat end portion thereof at a location comprised between said first hole and a proximal end of said corresponding lower flat end portion of said adjacent one of said tension webs to said upper flat end portion at a location comprised between said second hole and a proximal end of said corresponding upper flat end of said another adjacent one of said tension webs, thereby preventing transmission of tensile forces to said bolts.

6. A joist as defined in claim 5, wherein each said compression web is generally Z-shaped.

7. A joist as defined in claim 5, wherein said intermediate section of each compression web extends substantially at right angles to said lower and upper flat end portions thereof.

8. A joist as defined in claim 4, wherein said tension and compression webs extend in opposed diagonal directions relative to said lower and upper chords.

9. A joist as defined in claim 8, wherein each of said bolts also extends through a load transferring member disposed to engage an adjacent one of said tension web to reduce local deformations at the points of connection due to loads applied onto the joist.

10. A joist as defined in claim 9, wherein each said load transferring member has an angularly extending projection configured to bear against a corresponding intermediate section of one of said tension webs.

11. A joist as defined in claim 10, wherein each said load transferring member defines a hole for receiving one of said bolts, said hole being offset relative to a central point of said load transferring means.

12. A joist as defined in claim 11, wherein each said load transferring member is provided in the form of an eccentric washer.

13. A joist comprising upper and lower vertically spaced-apart chords rigidly interconnected by a succession of tension and compression webs extending between the chords, said upper and lower chords being each formed of a pair of elongated strips having substantially L-shaped cross-sections, said strips having parallel spaced-apart vertical legs and opposed horizontal legs, said vertical legs having a plurality of longitudinally spaced-apart holes defined therein, said tension and compression webs having opposed lower and upper flat end portions respectively received between said vertical legs of said upper chord and said lower chord, each said compression web having first and second holes respectively defined in said

upper and lower flat end portions thereof, said first hole being in registry with a corresponding hole defined in said upper flat end portion of an adjacent tension web and corresponding holes in said vertical legs of said upper chord for receiving a bolt, said second hole being in registry with a corresponding hole defined in said lower flat end portion of another adjacent tension web and corresponding holes in said vertical legs of said lower chord for receiving a bolt.

14. A joist as defined in claim 13, wherein said tension and compression webs are connected to each other and to said upper and lower chords at nodal points by way of a single grip bolt at each said nodal point.

15. A joist as defined in claim 13, wherein said tension and compression webs extend in opposed diagonal directions relative to said upper and lower chords.

16. A joist as defined in claim 14, wherein said tension webs extend substantially in a vertical direction between said lower and upper chords, while said compression webs extend in a diagonal direction with respect thereto.

17. A method of manufacturing joists comprising the steps of: providing a plurality of chords, advancing said chords in a substantially continuous manner to a die punch station where holes are defined in said chords at specific locations therealong according to a predetermined pattern, advancing said chords from said die punch station to a selected one of a shipping station and an assembly station, providing a plurality of elongated webs, advancing said webs in a substantially continuous manner to a forming station where said webs are flattened at opposed end portions thereof and where holes are defined at specific

locations in said opposed end portions, advancing said webs from said forming station to a selected one of said shipping station and an assembly station, and assembling joists by bolting pairs of prefabricated chords with prefabricated webs, wherein first and second adjacent webs are bolted together at respective first ends thereof to one chord, a second end of said second adjacent web being bolted together with a first end of an adjacent third web and to the other chord.

18. A method as defined in claim 17, further comprising the step of bending the opposed end portions of each said webs in parallel opposite directions while each said web is at said forming station.

19. A method as defined in claim 18, wherein said webs are bent at different angles depending whether the same will be used as tension or compression webs.

20. A method as defined in claim 19, wherein said opposed end portions of each said tension web are bent at right angles relative to a main elongated section thereof.

21. A method as defined in claim 17, wherein said chords and said webs are produced in parallel on two different production lines.

22. A method as defined in claim 17, wherein the step of providing a plurality of chords is effected by providing rolls of metal sheets having a specified width, passing said rolls of metal sheets through a roll former, and cutting said metal sheets into chords of predetermined lengths.

23. A method as defined in claim 22, further comprising the step of passing said chords through a

cleaning station after having passed said chords through said die punch station.

24. A method as defined in claim 23, further comprising the step of advancing said chords from said cleaning station to a painting station to apply paint thereon.

25. A method as defined in claim 24, further comprising the step of advancing said chords from said painting station to an infrared oven in order to dry the paint on said chords.

26. A method as defined in claim 17, wherein the step of providing webs is effected by providing rolls of metal sheets having a specific width, passing said rolls of sheets through a roll former, and cutting said metal sheets into webs of predetermined lengths.

27. A method as defined in claim 17, wherein the step of providing webs is effected by providing metal bars, and cutting said bars into webs of predetermined lengths.

28. A method as defined in claim 26 or 27, further including the step of transferring said webs from said forming station to a painting basin for applying paint thereto and then to an infrared oven for drying the paint on the webs.

29. A method as defined in claim 17, further including the step of applying an identification indicia on each of said webs and said chords before advancing the same to a selected one of said shipping station and said assembly station.